

United States  
Department of  
Agriculture

Forest  
Service

Arizona Zone  
Entomology &  
Pathology

2500 S. Pineknoll Dr.  
Flagstaff, AZ 86001

---

File Code: 3400  
Route To:

Date: August 22, 1997

Subject: Functional Assistance to the Old Moritz Sale Area.

To: Edward Johnson, Silviculturist

This letter represents my written comments on the two alternatives developed for the Old Moritz Sale Area. As you recall, we had visited the two sites (257-14 and 257-15) in early June.

#### Existing Condition

Both sites are densely stocked with ponderosa pine pole-sized trees and intermittent patches of large yellow-barked trees. There is some regeneration occurring in and around the large tree groups. Southwestern dwarf mistletoe (dm) infection of ponderosa pine is scattered throughout the area, with some areas being more heavily infected than others.

#### Alternative #1

The primary objective of this alternative is to protect pine regeneration from becoming infected with dwarf mistletoe by removing infected overstory trees. The areas proposed for treatment are small, ranging from approximately 0.1 to 2.25 acres in size, and are surrounded by densely stocked, dwarf mistletoe infected, pole-sized trees. Infected overstory trees will not be removed from areas where regeneration is already infected and the pole component will not be treated under this alternative.

Since the seeds of dwarf mistletoe are explosively released from an infected tree and travel distances of 10-50 ft, removing the immediate overstory source of infection may slow the spread to regeneration but not prevent it. Due to the small size of the harvested areas, spread of dwarf mistletoe infection to regeneration will still occur from the neighboring infected pole-sized trees. Since the pole component is not being treated, fire risk remains high, leaving the regeneration susceptible to injury during a fire.

Alternative #2

This alternative proposes to thin both sites in order to improve their overall "health", rather than focusing only on the established regeneration. The objectives are to: increase growth; reduce disease; reduce risk of stand replacement fire; protect mixed conifer habitat; protect and increase seedling component; and reduce the fire risk rating around private property from high to moderate.

Since it has been shown that trees with less than two-thirds of the crown infected with dm respond to the increase in water and nutrient availability after thinning, the more heavily dm infected trees should be targeted for removal. Although it looks like dwarf mistletoes are stimulated when a site is opened by thinning, the effects of disease are actually less pronounced in the more vigorous trees and the beneficial effects of thinning will be evident in increased growth rates.

The same concerns apply for the established regeneration as stated under Alternative #1 because there will still be a fair amount of mistletoe left in the sites. Perhaps it would be better to focus on meeting seedling/sapling component acres in areas with less mistletoe.

Please give me a call if you have questions, comments or other alternatives at (520-774-2162).

/s/ Mary Lou Fairweather  
Mary L. Fairweather  
Plant Pathologist

cc:  
FOR:R03a  
D.Parker:R03a